

WE CLAIM:

1. A hydronic heating system, comprising:
a conduit configured to carry a heat conductive liquid; and
a panel integrally formed together with a portion of the conduit;
wherein the panel is configured to absorb heat from a heat source and transfer the absorbed heat to the liquid in the conduit.
2. The system of claim 1, wherein the at least one panel is formed from a material that is configured to resist formation of condensation on a primary surface of the panel.
3. The system of claim 1, wherein an outer surface along a portion of the conduit length is encapsulated with a material that is configured to resist formation of condensation.
4. The system of claim 1, wherein the panel is formed from a high temperature material using a vacuum molding, compression molding, or casting process.
5. The system of claim 1, wherein the heat source is a combustion chamber enclosure having a plurality of chamber panels defining a combustion chamber for the combustion of fuel to generate heat, and the system panel is configured as one of the chamber panels.
6. The system of claim 1, further comprising a heat exchanger that removes heat from the liquid in the conduit at a location remote from the combustion chamber enclosure.
7. The system of claim 6, wherein a portion of the conduit extends through the heat exchanger.

8. The system of claim 1, further comprising a pump configured to move the liquid in the conduit.
9. The system of claim 5, wherein the combustion chamber enclosure includes a molded material, and the system panel and the portion of the conduit are integrally formed into a panel of the combustion chamber enclosure.
10. The system of claim 1, wherein the system is adapted and configured for removable engagement with a heat generating device that is configured as a heat source.
11. The system of claim 4, wherein the high temperature material is a moldable material that includes a ceramic fiber and a binder.
12. The system of claim 1, wherein a portion of the liquid-filled conduit is integrally formed together with two or more panels of the combustion chamber enclosure.
13. The system of claim 5, wherein the combustion chamber enclosure is part of a fireplace.
14. A hydronic heating system for a fireplace, the system comprising:
a liquid-filled conduit;
a combustion chamber enclosure having a plurality of panels defining a combustion chamber for the combustion of fuel to generate heat, the panels being integrally formed from a ceramic moldable material using a molding process, a portion of the liquid-filled conduit being integrally formed within at least one of the panels.
15. The system of claim 14, wherein the molding process includes a compression molding or a vacuum molding process.

16. The system of claim 14, wherein the moldable material includes a ceramic fiber and a binder.

17. The system of claim 14, wherein the moldable material resists formation of condensation on the panels.

18. The system of claim 14, wherein the panels of the combustion chamber enclosure are integrally formed as a single piece.

19. A method of manufacturing a hydronic heating system that includes a panel and a liquid-filled conduit, the method comprising the steps of:

forming the panel from a heat conductive moldable material; and
encapsulating a first portion of the conduit in the panel.

20. The method of claim 19, wherein the panel is formed using a vacuum molding, compression molding, or casting process.

21. The method of claim 19, wherein forming the panel includes forming the panel as panel of a combustion chamber enclosure, the combustion chamber enclosure defining a combustion chamber for the combustion of fuel to generate heat.

22. The method of claim 21, further comprising encapsulating a second portion of the conduit in a moldable material configured to resist formation of condensation on an outer surface of the moldable material.

23. The method of claim 19, wherein the moldable material includes a ceramic fiber and a binder.

24. The method of claim 21, wherein the encapsulating step includes encapsulating the first portion of the conduit in two or more panels of the combustion chamber enclosure.

25. The method of claim 21, wherein the panels of the combustion chamber enclosure are integrally formed as a single piece.

26. The method of claim 19, further comprising mounting the system to an outer surface or an inner surface of a heat generating device.

27. A hydronic heating system for a fireplace, the system comprising:
a combustion chamber enclosure having a plurality of panels defining a combustion chamber for the combustion of fuel to generate heat; and
a heat exchanger, including:
a molded panel; and
a liquid-filled conduit, a portion of the liquid-filled conduit being integrally formed within the molded panel;
wherein the molded panel is positioned adjacent to the combustion chamber enclosure.

28. The system of claim 27, further comprising an outer enclosure configured to enclose the combustion chamber enclosure and being spaced apart from the combustion chamber enclosure to define a plenum there between, wherein the heat exchanger is positioned adjacent to the outer enclosure.

29. The system of claim 28, wherein the heat exchanger is coupled to an outer surface of the outer enclosure.

30. The system of claim 28, wherein the heat exchanger is positioned within the plenum.

31. The system of claim 27, wherein the molded panel extends along two or more panels of the combustion chamber enclosure.

32. The system of claim 27, wherein the molded panel is positioned adjacent to a panel of the combustion chamber enclosure within the combustion chamber.

33. The system of claim 27, wherein the molded panel defines at least one panel of the combustion chamber enclosure.

34. The system of claim 27, wherein the molded panel includes a ceramic fiber and a binder.

35. The system of claim 27, wherein the liquid-filled conduit is defined by a pipe member, wherein a portion of the pipe member is molded into the molded panel.